

# APPENDIX B

## Industrial Wastewater Treatment Plant Point Rating System

A wastewater system with only collection, lift stations, and chlorination is considered a collection system and not a wastewater treatment plant. Each unit process should have points assigned only once.

Item	Points	Your Plant
<b>Size (1 point minimum to 10 point maximum)</b>		
Design flow average day or peak month's flow average day, whichever is larger  (1 point minimum to 10 point maximum)	1 pt/MGD or part	
<b>Preliminary Treatment</b>		
Grease removal	3	
Plant pumping of main flow	3	
Screening, comminution, microscreens	3	
Grit removal	3	
Equalization	1	
Sedimentation/clarification	5	
<b>Primary Treatment</b>		
Dissolved air flotation	3	
Coagulation/flocculation	5	
<b>Secondary Treatment</b>		
Bio-filtration with secondary clarifiers	10	
Activated sludge w/ secondary clarifiers (including extended aeration, oxidation ditches)	15	
Stabilization ponds without aeration	5	
Stabilization ponds with aeration	8	
<b>Tertiary Treatment</b>		
Ion exchange for advanced waste treatment	10	
Reverse osmosis, electrodialysis and other membrane filtration techniques	15	
Chemical recovery, carbon regeneration	4	
Polishing ponds for advanced waste treatment	2	
Chemical/physical advanced waste treatment w/o secondary	15	
Chemical/physical advanced waste treatment following secondary	10	
Biological or chemical/biological advanced waste treatment	12	
<b>Additional Treatment Processes</b>		
pH adjustment	1	

Oil separation	3	
Chemical pretreatment (except chlorination, enzymes)	4	
Filtration	6	
Air stripping	5	
<b>Solids Handling</b>		
Solids conditioning	2	
Solids thickening	5	
Anaerobic digestion of solids	10	
Aerobic digestion of solids	6	
Evaporative sludge drying	2	
Irrigation of solids	5	
Mechanical dewatering	8	
Solids reduction (including incineration, wet oxidation)	12	
On-site landfill for solids	2	
Solids composting	10	
<b>Disinfection (0 point minimum to 10 point maximum)</b>		
No disinfection	0	
Chlorination or comparable	5	
On-site generation of disinfectant	5	
<b>Effluent Discharge (0 point minimum to 21 point maximum)</b>		
Post aeration	4	
Receiving stream sensitivity (0 point minimum to 6 point maximum) <sup>1</sup>		
I. "Effluent limited segment" in US EPA terminology; secondary treatment is adequate	0	
II. More than secondary treatment is required	2	
III. "Water quality limited segment" in US EPA terminology; stream conditions are very critical (dry run, for example) and a very high degree of treatment is required	3	
IV. Direct recycle and reuse	6	
Land disposal, evaporation	2	
Subsurface disposal	4	
Biological or chemical scrubbers for odor control	5	
<b>Instrumentation (0 point minimum to 6 point maximum)<sup>3</sup></b>		
The use of SCADA or similar instrumentation systems to provide data with no process operation		0
The use of SCADA or similar instrumentation systems to provide data with limited process operation		2
The use of SCADA or similar instrumentation systems to provide data with moderate process operation		4

The use of SCADA or similar instrumentation systems to provide data with extensive or total process operation		6
<b>Laboratory control (0 point minimum to 20 point maximum)<sup>2</sup></b>		
Bacteriological/biological (0 point minimum to 10 point maximum)		
V.Lab work done outside the plant	0	
VI.Membrane filter procedures	3	
VII.Use of fermentation tubes or any dilution method; fecal coliform determination	5	
VIII.Biological identification	7	
IX.Viral studies or similarly complex work conducted on-site	10	
Chemical/physical (0 point minimum to 10 point maximum)		
X.Lab work done outside the plant	0	
XI.Push-button or visual methods for simple tests (pH, settleable solids)	3	
XII.Additional procedures (DO, COD, BOD gas analysis, titrations, solids, volatile content)	5	
XIII.More advanced determinations (specific constituents; nutrients, total oils, phenols)	7	
XIV.Highly sophisticated instrumentation (atomic absorption, gas chromatography)	10	
<b>Your Plant Total</b>		

1. The key concept is the degree of dilution provided under low flow conditions with points from 0 to 6.
2. The key concept is to credit laboratory analyses done on-site by plant personnel under direct responsible charge with points from 0 to 20.
3. Supervisory Control and Data Acquisition (SCADA) system.



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